



## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2021-0881; Project Identifier AD-2020-01062-T]**

**RIN 2120-AA64**

#### **Airworthiness Directives; Gulfstream Aerospace Corporation Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** The FAA proposes to supersede Airworthiness Directive (AD) 2020-12-06, which applies to all Gulfstream Aerospace Corporation (Gulfstream) Model G-IV airplanes. AD 2020-12-06 requires replacing the nose wheel steering servo valve manifold, incorporating revised operating procedures into the airplane flight manual (AFM), doing a records inspection for any incidents of un-commanded nose wheel steering turns, and reporting the results to the FAA. Since the FAA issued AD 2020-12-06, the FAA determined that a typographical error was made in a citing one of the AFM documents. This proposed AD would retain the actions of AD 2020-12-06 and would correct the citation to the AFM. The FAA is proposing this AD to address the unsafe condition on these products.

**DATES:** The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.

- Fax: (202) 493-2251.

- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, GA 31402; phone: (800) 810-4853; email: [pubs@gulfstream.com](mailto:pubs@gulfstream.com); website: <https://www.gulfstream.com/en/customer-support/>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, FAA, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

### **Examining the AD Docket**

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0881; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations is listed above.

**FOR FURTHER INFORMATION CONTACT:** Samuel Belete, Aviation Safety Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5580; fax: (404) 474-5606; email: [samuel.belete@faa.gov](mailto:samuel.belete@faa.gov).

### **SUPPLEMENTARY INFORMATION:**

#### **Comments Invited**

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0881; Project Identifier AD-2020-01062-T” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend the proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this proposed AD.

### **Confidential Business Information**

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Samuel Belete, Aviation Safety Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

### **Background**

The FAA issued AD 2020-12-06, Amendment 39-21141 (85 FR 36143, June 15, 2020) (AD 2020-12-06), for all Gulfstream Model G-IV airplanes. AD 2020-12-06 was prompted by reports of un-commanded nose wheel steering turns. AD 2020-12-06 requires replacing the nose wheel steering servo valve manifold, incorporating revised operating procedures into the AFM, doing a records inspection for any incidents of un-commanded nose wheel steering turns, and reporting the results to the FAA. The agency issued AD 2020-12-06 to prevent moisture from entering the nose steering wheel servo valve, which could freeze and cause an un-commanded nose wheel steering position during touchdown.

### **Actions Since AD 2020-12-06 Was Issued**

Since the FAA issued AD 2020-12-06, a typographical error was found in the title of the AFM required by paragraph (g)(3) of AD 2020-12-06. The paragraph incorrectly

references the document number as “FAC-AC-G400-OPS-0001” instead of “GAC-AC-G400-OPS-0001.”

### **FAA’s Determination**

The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

### **Related Service Information under 1 CFR Part 51**

This proposed AD would require Gulfstream IV Customer Bulletin Number 244, dated March 12, 2018; Gulfstream G300 Customer Bulletin 244, dated March 12, 2018; Gulfstream G400 Customer Bulletin 244, dated March 12, 2018; Gulfstream IV Airplane Flight Manual, Gulfstream Aerospace Document Number GAC-AC-GIV-OPS-0001, Revision 52, dated October 30, 2017; Gulfstream G300 Airplane Flight Manual, Gulfstream Aerospace Document Number GAC-AC-G300-OPS-0001, Revision 20, dated October 30, 2017; and Gulfstream G400 Airplane Flight Manual, Gulfstream Aerospace Document Number GAC-AC-G400-OPS-0001, Revision 20, dated October 30, 2017; which the Director of the Federal Register approved for incorporation by reference as of July 20, 2020 (85 FR 36143, June 15, 2020).

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

### **Proposed AD Requirements in this NPRM**

This proposed AD would retain most of the requirements of AD 2020-12-06. This proposed AD would require revising the AFM (with the correct title of the AFM document for G400 airplanes) and replacing the nose wheel steering servo valve manifold. This proposed AD would also require doing a records inspection for any incidents of un-commanded nose wheel steering turns and reporting all recorded occurrences of un-commanded nose wheel steering turns to the FAA.

### **Differences Between This Proposed AD and the Service Information**

The Gulfstream customer bulletins require reporting compliance with the bulletins to Gulfstream. This proposed AD does not contain that requirement; however, this

proposed AD would require reporting any known occurrences of un-commanded nose wheel steering turns to the FAA.

The Gulfstream customer bulletins include a compliance time of 48 months beginning on March 12, 2018. The compliance time for this proposed AD is 36 months after July 20, 2020 (the effective date of AD 2020-12-06).

### **Costs of Compliance**

The FAA estimates that this AD, if adopted as proposed, would affect 425 airplanes of U.S. registry.

The FAA estimates the following costs to comply with this proposed AD:

#### **Estimated costs**

<b>Action</b>	<b>Labor Cost</b>	<b>Parts Cost</b>	<b>Cost per product</b>	<b>Cost on U.S. operators</b>
Incorporate AFM revision	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$36,125
Replace nose wheel steering servo valve	7 work-hours X \$85 per hour = \$595	\$63,624	\$64,219	\$27,293,075
Review records	1 work-hour X \$85 per hour = \$85	\$0	\$85	\$36,125
Report results	1 work hour X \$85 per hour = \$85	\$0	\$85	\$36,125

The FAA has included all known costs in its cost estimate. According to the manufacturer, however, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected operators.

### **Paperwork Reduction Act**

A federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a currently valid OMB Control Number. The OMB Control Number for this information collection is 2120-0056. Public reporting

for this collection of information is estimated to be approximately 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Aviation Administration, 10101 Hillwood Parkway, Fort Worth, TX 76177-1524.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and

(3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive 2020-12-06, Amendment 39-21141 (85 FR 36143, June 15, 2020); and

b. Adding the following new airworthiness directive:

**Gulfstream Aerospace Corporation;** Docket No. FAA-2021-0881; Project Identifier AD-2020-01062-T.

#### **(a) Comments Due Date**

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2020-12-06, Amendment 39-21141 (85 FR 36143, June 15, 2020) (AD 2020-12-06).

#### **(c) Applicability**

This AD applies to all Gulfstream Aerospace Corporation Model G-IV airplanes, certificated in any category.

#### **(d) Subject**

Joint Aircraft System Component (JASC) Code 3200, Landing Gear System.

**(e) Unsafe Condition**

This AD was prompted by reports of un-commanded nose wheel steering turns. The FAA is issuing this AD to prevent moisture from entering the nose steering wheel servo valve, which could freeze and cause an un-commanded nose wheel steering position during touchdown. The unsafe condition, if not addressed, could result in a lateral runway departure.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Airplane Flight Manual Revisions for Certain Airplanes**

This paragraph restates the requirements of paragraph (g)(1) and (2) of AD 2020-12-06. Within 30 days after July 20, 2020 (the effective date of AD2020-12-06), revise your airplane flight manual (AFM) by incorporating the revision applicable to your airplane configuration as listed in paragraphs (g)(1) and (2) of this AD:

(1) Gulfstream IV Airplane Flight Manual, Gulfstream Aerospace Document Number GAC-AC-GIV-OPS-0001, Revision 52, dated October 30, 2017; or

(2) Gulfstream G300 Airplane Flight Manual, Gulfstream Aerospace Document Number GAC-AC-G300-OPS-0001, Revision 20, dated October 30, 2017.

**(h) Correction to AFM Revision for Certain Airplanes**

Within 30 days after the effective date of this AD, revise your AFM by incorporating Gulfstream G400 Airplane Flight Manual, Gulfstream Aerospace Document Number GAC-AC-G400-OPS-0001, Revision 20, dated October 30, 2017, if applicable to your airplane configuration.

**(i) Retained Replacement of Nose Wheel Steering Servo Valve Manifold with No Changes**

The paragraph restates the requirements of paragraph (h) of AD 2020-12-06 with no changes. Within 36 months after July 20, 2020 (the effective date of AD2020-12-06), replace the nose wheel steering servo valve manifold with nose wheel steering servo valve manifold part number 5100-11 or 5105-5 in accordance with the Accomplishment Instructions of the customer bulletin that applies to your airplane configuration as listed



in paragraphs (i)(1) through (3) of this AD, except you are not required to comply with step H:

- (1) Gulfstream IV Customer Bulletin Number 244, dated March 12, 2018;
- (2) Gulfstream G300 Customer Bulletin 244, dated March 12, 2018; or
- (3) Gulfstream G400 Customer Bulletin 244, dated March 12, 2018.

**(j) Retained Records Inspection and Report of Results with No Changes**

This paragraph restates the requirements of paragraph (i) of AD 2020-12-06 with no changes.

(1) Between 12 months and 24 months after the replacement of the nose wheel steering valve manifold assembly required in paragraph (i) of this AD, inspect all aircraft records for entries of an un-commanded nose wheel steering turn.

(2) Within 10 days after the records inspection required in paragraph (j)(1) of this AD, report the results of the inspection, regardless of whether the inspection found any entries, to the FAA by either email: 9-ASO-ATLCOS-Reporting@faa.gov; or by mail: Attn: Continued Operational Safety, Atlanta ACO Branch, FAA, 1701 Columbia Avenue, College Park, GA 30337. The report must include as much of the information listed in paragraphs (j)(2)(i) through (vii) of this AD as is known about the event:

- (i) Date of records inspection;
- (ii) Date and time of all un-commanded occurrences (if any);
- (iii) Airplane serial number;
- (iv) Weather and runway conditions at the time of each occurrence;
- (v) Copy of the pilot's report of the occurrence (if available);
- (vi) Maintenance entry of the root cause of the un-commanded deflection (if available); and
- (vii) Any other information pertinent to the occurrence.

**(k) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Atlanta ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local

Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (l)(1) of this AD.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

**(l) Related Information**

(1) For more information about this AD, contact Samuel Belete, Aviation Safety Engineer, Systems and Equipment Section, FAA, Atlanta ACO Branch, 1701 Columbia Avenue, College Park, GA 30337; phone: (404) 474-5580; fax: (404) 474-5606; email: [samuel.belete@faa.gov](mailto:samuel.belete@faa.gov).

(2) For service information identified in this AD, Gulfstream Aerospace Corporation, P.O. Box 2206, Savannah, GA 31402; phone: (800) 810-4853; email: [pubs@gulfstream.com](mailto:pubs@gulfstream.com); website: <https://www.gulfstream.com/en/customer-support/>. You may view this referenced service information at the FAA Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued on October 13, 2021.

Lance T. Gant, Director,  
Compliance & Airworthiness Division,  
Aircraft Certification Service.

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